



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,517	09/19/2003	Michael D. Morris	01081CON	9174

7590 07/10/2006

Michelle B. Lando
Cabot Corporation
Billerica Technical Center
157 Concord Road
Billerica, MA 01821-7001

EXAMINER

JACKSON, MONIQUE R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/666,517	Applicant(s) MORRIS ET AL.	
	Examiner Monique R. Jackson	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,10-15 and 17-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,10-15 and 17-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1773

DETAILED ACTION

1. The amendment filed 4/20/06 has been entered. Claims 8, 9, and 16 have been canceled. Claims 1-3, 5-7, 10-15, 17-29 are pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1-3, 5-7, 10-15, and 17-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Sharma et al in view of Kitamura et al or Sekiguchi or Sakaki et al '383 or Sakaki et al '774 or Kurabayashi et al, for the reasons recited in the prior office action and restated below.

4. As discussed previously, Sharma et al teach an ink jet recording element comprising a support having thereon an image-receiving layer containing finely divided particulate material and a metal(oxy)hydroxide complex wherein the resulting ink jet recording element, when printed with dye-based inks, provides superior optical densities, good image quality and has an excellent dry time and image stability, such as when exposed to an atmosphere comprising ozone (Abstract; Paragraphs 0018, 0027, 0121.) Sharma et al teach that the image-receiving layer is formed from an aqueous dispersion coated onto the support, preferably a paper support, wherein the dispersion comprises the particulate material, preferably a water-insoluble inorganic solid like fumed alumina; the metal(oxy)hydroxide complex, preferably a zirconium compound including those as instantly claimed such as zirconium hydroxychloride; and a polymeric binder, preferably poly(vinyl alcohol) (Paragraphs 0030, 0035, 0038, 0040; Examples.) Sharma et al further teach that the inorganic particles useful in the invention can be of any size but preferably

Art Unit: 1773

have a mean particle diameter of less than about 1 micron (Paragraph 0037.) Sharma et al further teach specific examples that read upon the instantly claimed aqueous dispersions including ratios, binder weight percent and pH values within the instantly claimed ranges (Example 1, I-7 to I-12; Example 2.)

Sharma et al do not specifically teach the aggregate particle size and BET surface area of the fumed alumina as instantly claimed however, considering particle size and BET surface area are known result-effective variables affecting the imaging properties of the ink receiving layer of an ink jet recording medium, including optical density and ink or dye adsorption as taught by Kitamura et al, Sekiguchi, Sakaki et al '383, Sakaki et al '774, and Kurabayashi et al, one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum average particle size and BET surface area of the fumed alumina to provided the desired properties for a particular end use, wherein the cited prior art references suggest that a BET value within the instantly claimed range would provide improved ink adsorption and imaging properties of the ink jet recording element taught by Sharma et al.

Response to Arguments

5. Applicant's arguments filed 4/20/06 have been fully considered but they are not persuasive. The Applicant has amended the claims to incorporate the ratio limitation of zirconium to fumed alumina into the base claim and argues that Sharma et al do not teach or suggest the benefit of such a ratio in terms of alleged "unexpected" ozone resistance. However, as discussed above, the only difference between Sharma et al and the instant invention is the aggregate particle size and BET surface area, not the zirconium/fumed silica ratio. In fact,

Art Unit: 1773

Sharma et al teach specific examples that read upon the claimed zirconium/fumed alumina ratio and also disclose that the ink jet recording element has an excellent dry time and image stability, such as when exposed to an atmosphere comprising ozone. Hence, though Sharma et al do not specifically teach the benefit of the zirconium/fumed silica ratio with respect to ozone resistance, the fact that the Applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

Art Unit: 1773

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Monique R. Jackson
Primary Examiner
Technology Center 1700
July 5, 2006